37. (Amended) The device according to claim 29, wherein each one of the plurality of transistors is coupled in series to the corresponding one of the plurality of diodes.

REMARKS

Claims 1-6, 8-18, 20-24, and 27-37 remain pending in the above-referenced application and are submitted for the Examiner's reconsideration.

The Examiner objected to the drawings because "the second transistor including an interrupter connected parallel to the controlled transistor bridge of claims 11, 12, 23, 24, 35, and 36 and the transistors coupled in series of claim 37 must be shown or the feature(s) canceled from the claim(s)." Office Action dated 12/1/00 at page 2. With respect to that portion of the objection based on the second transistor limitation, Applicants are unclear on what exactly is believed by the Examiner to be missing from the drawings. The transistor bridge is present in the drawings, as shown, for example, in the arrangement of transistors T1 to T6 in Figure 3. The second transistor is also present in the drawings, as shown, for example, by transistor T7 in Figure 3. Moreover, Applicants assume that the Examiner does not believe that the recited interrupter is missing from the drawings, since that limitation appears, for instance, in claim 1 as well, against which the Examiner has not asserted an objection on this basis. The only other feature left is the parallel connection. Applicants have deleted this from the claims and respectfully submit that this portion of the claims has been obviated.

As for the objection based on claim 37, Applicants submit that the amendment made to the claim has obviated this objection.

Claims 11, 12, 23, 24, 32, and 34-37 stand rejected under 35 U.S.C. § 112, ¶, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that Applicants, at the time the application was filed, had possession of the claimed invention. According to the Examiner, the original specification does not support the subject matter in claims 11, 12, 23, 24, 35, and 36 pertaining to a second transistor including an interrupter connected to a controlled transistor bridge. Applicants respectfully disagree with this conclusion. This subject matter appears in the original claims. Since the original claims form part of the original specification, and since this subject matter is recited in the original claims, then Applicants can reasonably assert that when the application was filed, they had possession of this subject matter.

The same rationale justifies Applicants' contention that claims 32 and 34

satisfy the written description requirement. In particular, both of these claims recite a further semiconductor switching device. Because this subject matter appears in original claim 14, Applicants submit that they had possession of this subject matter as of the time this application was filed. what is this

Claims 27 and 28 stand rejected under 35 U.S.C. § 112, ¶2, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In view of the amendments made to these claims, Applicants submit that this rejection has been obviated.

Claim 29 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,825,139 to Hamelin et al. ("Hamelin"). According to the Examiner, the last paragraph of column 8 in Hamelin discusses a plurality of transistors arranged as a step-up converter. In the prior communication from Applicants, this assertion was disputed since this portion of Hamelin discusses the transistors as providing a "chopping function" on the voltage at terminals A, B, and C. Col. 8, ll. 44-46. Moreover, later on in column 8, the voltage is described as being "clipped". Col. 8, l. 55. A description of these transistors as serving as a step-up converter is absent in this portion of Hamelin. Instead of allowing claim 29 on this basis, the Examiner has provided Applicants with a passage from the "Comprehensive Dictionary Of Electrical Engineering" to demonstrate "why the chopping and clipping disclosed in column 8 of the reference is for a step-up function." Office Action dated 12/1/00 at page 5. Applicants understand this statement to mean that the Examiner believes that the transistors expressly described in Hamelin as a voltage chopping arrangement are also implicitly a step-up conversion arrangement as well. It would make no sense to read this statement to mean that the chopping in Hamelin, as one discrete operation performed by one set of elements, is for another discrete operation, namely, step-up conversion, performed by another set of elements, since the gist of this discussion is to determine whether or not Hamelin teaches a plurality of transistors serving as a step-up converter. The dictionary cited by the Examiner defines a step-up converter in terms of a boost converter as follows:

> a circuit configuration in which a transistor is switched by PWM trigger pulses and a diode provides an inductor-current continuation path when the transistor is off. During the transistor on-time, the current builds up in the inductor. During the transistor off-time, the voltage across the inductor reverses and adds to the input voltage, as a result, the output voltage is greater than the input voltage.

The text of Hamelin unequivocally describes transistors T1-T3 as chopping a particular voltage. The Examiner has stated that "the chopping and clipping disclosed in column 8 of the reference is for a step-up function", and has cited this dictionary definition as proof for this assertion. Applicants do not understand how this can be, especially since the dictionary definition never mentions voltage chopping, much less characterize voltage chopping and step-up conversion as different terms for the same operation. All that this definition does is describe, without ever mentioning voltage chopping either explicitly or implicitly, how an output voltage greater than an input voltage is produced. If the definition itself does not mention voltage chopping, how can this definition establish that the chopping in Hamelin "is for a step-up converter"? Claim 29 recites a step-up converter, not something "for" a step-up converter. If the Examiner persists in maintaining this rejection, Applicants would appreciate a specific explanation detailing which words in this definition supports the Examiner's belief that the voltage chopping transistor arrangement in Hamelin is also a step-up converter.

Claims 1-6, 8-10, 13-18, 20-22, 30, 31, and 33 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,825,139 to Hamelin et al. ("Hamelin") in view of U.S. Patent No. 5,793,625 to Balogh ("Balogh"). The Examiner concedes that Hamelin does not teach a smoothing capacitor and relies on Balogh to overcome this deficiency. Particularly, the Examiner believes that capacitor C in Balogh, who refers to it as an "output capacitor" and a "decoupling capacitor" but never as a "smoothing capacitor", corresponds to the smoothing capacitor recited in the claims. Applicants respectfully disagree. In particular, the Examiner is directed to column 8, lines 31-34, which states: "The curve labeled 103 is the rectified output of the circuit, i.e., the voltage across the terminals of the decoupling capacitor C. It shows a significant amount of ripple." If decoupling capacitor C permits an output with a significant ripple, in what way can it be characterized as a smoothing capacitor? The output ripple is not eliminated in Balogh by operation of decoupling capacitor C, but only after the boost mode is enabled, at which time the FETs are opening and closing at a high speed. Col. 8, ll. 40-46. Therefore, because Balogh does not teach or suggest, either alone or in combination with Hamelin, a smoothing capacitor as recited in the above-referenced claims, Applicants respectfully request withdrawal of the rejection of claim 1 and 13 under 35 U.S.C. § 103(a).

As for claims 2-6, 8, 9, 10, and 31, Applicants submit that these claims are patentable for at least the same reasons given in support of the patentability of claim 1.

As for claims 13-18, 20-22, and 33, Applicants submit that these claims are patentable for at least the same reasons given in support of the patentability of claim 13.

As for claim 30, Applicants submit that this claim is patentable for the reasons given in support of the patentability of claim 29, and also for the reasons given in support of the patentability of claims 1 and 13.

With respect to claims 11, 12, 23, 24 ,27, 28, 32, and 34-37, Applicants note that these claims are not rejected in view of prior art. Applicants would appreciate receiving from the Patent Office an indication that at least these claims include allowable subject matter.

Applicants assert that the present invention is new, non-obvious, and useful. Consideration and allowance of the claims are requested.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached pages are captioned "Version With Markings To Show Changes Made."

Respectfully submitted,

KENYON & KENYON

Dated: 4/30/01

By: [signature] by: [signature] Reg No 35,952
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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

Claims 11, 23, 27, and 33-37 have been amended as follows:

11. (Twice Amended) A device for controlling a generator including a controlled transistor bridge having a first transistor, comprising:

a second transistor for at least temporarily short-circuiting the controlled transistor bridge, the second transistor including an interrupter connected [parallel] to the controlled transistor bridge,

wherein the second transistor has a base which receives a control signal, and

wherein the controlled transistor bridge provides a step-up converter function.

23. (Twice Amended) A method for controlling a generator having a controlled transistor bridge including a first transistor, the method comprising the steps of:

at least temporarily short-circuiting the controlled transistor bridge using a second transistor, the second transistor including an interrupter coupled [parallel] to the controlled transistor bridge;

providing a control signal to a base of the second transistor for controlling the generator; and

providing a step-up converter function using the controlled transistor bridge.

27. (Twice Amended) A device for controlling a generator, comprising:

a controlled transistor bridge including:

a plurality of first transistors, <u>each one of the plurality of first transistors being coupled to at least another one of the plurality of first transistors,</u> and

one of a second transistor coupled to <u>at least one of</u> the plurality of first transistors and a freewheeling diode coupled to <u>at least one of</u> the plurality of first transistors, wherein the controlled transistor bridge provides a step-up converter function.

33. (Amended) The [device] method according to claim 13, wherein the transistor includes an insulated gate bipolar transistor.

34. (Amended) The [device] method according to claim 13, wherein the transistor includes a further semiconductor switching device.

35. (Amended) A device for controlling a generator including a controlled transistor bridge having a freewheeling diode, comprising:

a transistor for at least temporarily short-circuiting the controlled transistor bridge, the transistor including an interrupter connected [parallel] to the controlled transistor bridge,

wherein the transistor has a base which receives a control signal, and

wherein the controlled transistor bridge provides a step-up converter function.

36. (Amended) A method for controlling a generator having a controlled transistor bridge including a freewheeling diode, the method comprising the steps of:

at least temporarily short-circuiting the controlled transistor bridge using a transistor, the transistor including an interrupter coupled [parallel] to the controlled transistor bridge;

providing a control signal to a base of the transistor for controlling the generator; and

providing a step-up converter function using the controlled transistor bridge.

37. (Amended) The [method] device according to claim 29, wherein each one of the plurality of transistors is coupled in series [only] to the corresponding one of the plurality of diodes.